UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/685,313	10/10/2000	Brandon Mitchell Burrell	42626/204668	4354

826 7590 03/07/2005

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER	
SMITH, PETER J	
ART UNIT	**PAPER NUMBER**
2176	

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/685,313	BURRELL, BRANDON MITCHELL	
	Examiner	Art Unit	
	Peter J Smith	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications: amendment filed on 10/14/2004.

2. Claims 1-39 are pending in the case. Claims 1, 14 and 27 are independent claims.

Claim Objections

3. Claim 28 is objected to because of the following informalities: Dependent claim 28 depends upon itself. The Examiner believes claim 28 was intended to be dependent on independent claim 27 and has examined it as such. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merkin, US 5,812,390 patented 9/22/1998 in view of Lim et al. (hereinafter "Lim"), US 5,418,718 and Wei et al. (hereinafter "Wei"), "ASCII Printable Characters-Based Chinese Character Encoding for Internet Messages", downloaded from [http://www.cse.ohio-state.edu/cgi-bin/rfc/rfc1842.html], memo created August 1995.

Regarding independent claim 1, Merkin teaches a string data area stored in a range of memory addresses in a computer-readable medium, wherein the string data area includes a plurality of data strings to be displayed by a display management module in fig. 2 and 4, col. 6

lines 32-65 and col. 7 lines 26-35. Merkin does not specifically teach what the characters of each data string are composed of and does not teach using escape codes to identify double byte characters from ASCII characters. Lim teaches a text string composed of both single byte and double byte character sets in the fig. 4C and 4D, the abstract, and col. 1 lines 60-62. Lim teaches determining whether a character in a text string is a single or double byte character in fig. 5 and col.5 lines 22-25. Wei teaches the use of escape codes to identify single and double byte characters in a string of text in section 2 on pages 2 and 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaches of Merkin, Lim, and Wei to have created the claimed invention. It would have been obvious and desirable to have used the multi-byte text string teaching of Lim to have improved the stored text strings of Merkin. Lim teaches that multi-byte text strings allow for displaying text in two different languages such as English and Japanese in the abstract and col. 2 lines 34-48. Wei teaches encoding both single byte ASCII and a double byte character set in a text string and determining each character based on an escape code. Wei is directed to encoding English and Chinese character sets in a string of text. Merkin is directed towards separating text strings from the BIOS code so that only the text strings need modification to display different languages, thus avoiding a need for modification to the BIOS code. Since Merkin, Lim, and Wei are directed towards text strings representing a plurality of languages, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined their teachings.

Regarding independent claim 14, Merkin teaches creating a string data area in a range of memory addresses in the computer-readable medium for storing each of the data strings in fig.

2 and 4, col. 6 lines 32-65 and col. 7 lines 26-35. Merkin does not specifically teach what the characters of each data string are composed of and does not teach using escape codes to identify double byte characters from ASCII characters. Lim teaches a text string composed of both single byte and double byte character sets in the fig. 4C and 4D, the abstract, and col. 1 lines 60-62. Lim teaches determining whether a character in a text string is a single or double byte character in fig. 5 and col.5 lines 22-25. Wei teaches the use of escape codes to identify single and double byte characters in a string of text in section 2 on pages 2 and 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaches of Merkin, Lim, and Wei to have created the claimed invention. It would have been obvious and desirable to have used the multi-byte text string teaching of Lim to have improved the stored text strings of Merkin. Lim teaches that multi-byte text strings allow for displaying text in two different languages such as English and Japanese in the abstract and col. 2 lines 34-48. Wei teaches encoding both single byte ASCII and a double byte character set in a text string and determining each character based on an escape code. Wei is directed to encoding English and Chinese character sets in a string of text. Merkin is directed towards separating text strings from the BIOS code so that only the text strings need modification to display different languages, thus avoiding a need for modification to the BIOS code. Since Merkin, Lim, and Wei are directed towards text strings representing a plurality of languages, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined their teachings.

Regarding independent claim 27, Merkin teaches creating a string data area in a range of memory addresses in the computer-readable medium for storing each of the data strings in fig.

2 and 4, col. 6 lines 32-65 and col. 7 lines 26-35. Merkin does not specifically teach what the characters of each data string are composed of and does not teach using escape codes to identify double byte characters from ASCII characters. Lim teaches a text string composed of both single byte and double byte character sets in the fig. 4C and 4D, the abstract, and col. 1 lines 60-62. Lim teaches determining whether a character in a text string is a single or double byte character in fig. 5 and col.5 lines 22-25. Wei teaches the use of escape codes to identify single and double byte characters in a string of text in section 2 on pages 2 and 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the teaches of Merkin, Lim, and Wei to have created the claimed invention. It would have been obvious and desirable to have used the multi-byte text string teaching of Lim to have improved the stored text strings of Merkin. Lim teaches that multi-byte text strings allow for displaying text in two different languages such as English and Japanese in the abstract and col. 2 lines 34-48. Wei teaches encoding both single byte ASCII and a double byte character set in a text string and determining each character based on an escape code. Wei is directed to encoding English and Chinese character sets in a string of text. Merkin is directed towards separating text strings from the BIOS code so that only the text strings need modification to display different languages, thus avoiding a need for modification to the BIOS code. Since Merkin, Lim, and Wei are directed towards text strings representing a plurality of languages, it would have been obvious to one of ordinary skill in the art at the time of the invention to have combined their teachings.

Regarding dependent claims 2, 15, and 28, Merkin teaches a font module for displaying a text message in fig. 1 and 4. Merkin does not specifically teach that the font module

for displays 256 standard and extended ASCII characters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a font module to have displayed 256 standard and extended ASCII characters so that common standard fonts would have been appropriately rendered on the display screen.

Regarding dependent claim 3, 16, and 29, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically teach an extended ASCII font data area stored in a range of memory addresses in a computer-readable medium for storing font data related to extended ASCII characters that are not displayable with the extended ASCII character data stored in a font module. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have stored data related to extended ASCII characters which were not displayable so that the characters could have been handled appropriately.

Regarding dependent claim 4, 17, and 30, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach a double byte character font data area stored in a range of memory addresses in a computer-readable medium for storing font data related to double byte characters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have to have stored font data relating to double byte characters so that the characters could have been displayed correctly.

Regarding dependent claim 5, 18, and 31, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach a double byte character font data area which includes only font data for the double byte characters present in the data strings to be displayed

by the display management module to thereby minimize data storage space. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have only included font data relevant to the data strings to have minimized storage space since the original motivation for separating the strings from the code was to have minimized storage space.

Regarding dependent claim 6, 19, and 32, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach double byte characters which are sequentially encoded with 16 bit values and the code values representing the double byte characters are stored in a string data are and wherein the font data associated with the double byte characters is stored in the double byte character font data area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have encoded the double bytes with 16 bit values since the double byte characters are composed of 16 bits. It would have been obvious to one of ordinary skill in the art at the time of the invention to have logically maintained the font data associated with the double byte characters in the double byte character font data area.

Regarding dependent claim 7, 20, and 33, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach wherein ASCII codes at least as great as a selected escape code are encoded in a string data area as 16 bit codes, wherein each 16 bit code comprises an escape code proceeded by the ASCII code of the standard ASCII and extended ASCII character. Wei teaches using an escape code to encode both single and double byte characters within a string of text in section 2 in pages 2 and 3. It would have been obvious to

one of ordinary skill in the art at the time the invention was made to have used the teaching of Wei to have modified Merkin to have used an escape code to have encoded 16 bit codes within single byte ASCII codes. This would have allowed the invention to have accommodated languages requiring more than 256 symbols. Merkin provides motivation for accommodating a plurality of foreign languages in a BIOS in col. 2 lines 17-36.

Regarding dependent claim 8, 21, and 34, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach wherein the double byte characters are sequentially encoded into 16 bit codes, wherein the first double byte character is represented by a 16 bit code having a first byte that is one value greater than the escape code and a second byte equal to zero and the remaining unique double byte characters are encoded with sequential 16 bit code values. Wei teaches using an escape code to encode both single and double byte characters within a string of text in section 2 in pages 2 and 3. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the teaching of Wei to have modified Merkin to have used an escape code to have encoded 16 bit codes within single byte ASCII codes. This would have allowed the invention to have accommodated languages requiring more than 256 symbols. Merkin provides motivation for accommodating a plurality of foreign languages in a BIOS in col. 2 lines 17-36.

Regarding dependent claim 9, 22, and 35, Merkin teaches storing text message data in fig. 2-3 and col. 6 lines 32-65. Merkin does not specifically what kind of character set is used for the text messages and thus does not explicitly teach wherein the selected escape code is E0 hexadecimal, wherein the double byte characters are sequentially encoded and stored in a string

data area such that the first double byte character is represented by the 16 bit code value E100 in hexadecimal and the remaining unique double byte characters are encoded with sequential 16 bit values from E101 to FFFF hexadecimal, and wherein the extended ASCII characters having ASCII codes at least as great as the selected escape code are encoded in the string data are as 16 bit codes with the selected escape code as the first byte and the ASCII code for the extended ASCII character as the second byte. Wei teaches using an escape code to encode both single and double byte characters within a string of text in section 2 in pages 2 and 3. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the teaching of Wei to have modified Merkin to have used an escape code to have encoded 16 bit codes within single byte ASCII codes. This would have allowed the invention to have accommodated languages requiring more than 256 symbols. Merkin provides motivation for accommodating a plurality of foreign languages in a BIOS in col. 2 lines 17-36.

Regarding dependent claim 10, 23, and 36, Merkin teaches storing strings in a plurality of particular languages and wherein each string contains a header associated with the data string area that is stored in a range of memory addresses, wherein the header indicates the language with which the data strings are stored in the string data area in fig. 2, col. 2 lines 17-36 and col. 6 lines 25-31.

Regarding dependent claim 11, 24, and 37, Merkin does not teach a header having data stored therein indicating whether the data structure further includes an extended ASCII font data area stored in a range of memory addresses in a computer-readable medium for storing font data related to extended ASCII characters are not displayable with the extended ASCII character font data stored in the font module. It would have been obvious to one of ordinary skill in the art at

the time the invention was made to have used a header in the data structure to have indicated which characters were not displayable with the extended ASCII character font data stored in the font module.

Regarding dependent claim 12, 25, and 38, Merkin does not teach a header indicating whether the data structure comprises a double byte character font data area stored in a range of memory addresses in the computer-readable medium for storing font data related to characters that are double byte characters. Lim teaches a string of text containing mixed byte character sets including single byte character sets and double by character sets in fig. 2, the abstract, and col. 1 line 59 – col. 2 line 48. Lim teaches identifying single and double byte characters in the text string in fig. 5 and col. 6 lines 22-27.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Lim into Merkin to have created the claimed invention. It would have been obvious and desirable to have used the teaching of a mixed text string of single and double byte character sets to have improved Merkin so that the text could have contained text of different languages as is taught by Lim into col. 1 line 59 – col. 2 line 48.

Regarding dependent claim 13, 26, and 39, Merkin teaches wherein the data structure further comprises a strong pointer table stored in a range of memory addresses including pointers indicating the location of data strings in the string data area in fig. 2 and 4, col. 6 lines 32-65 and col. 7 lines 26-35.

Response to Arguments

6. Applicant's arguments, see pages 2 and 3 of the response, filed 10/14/2004, with respect to the rejection(s)of claim(s) 1-39 under Merkin in view of Kuntz et al. have been fully considered and are persuasive. Kuntz is directed towards printing strings of text and not displaying strings of text. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Merkin in view of Lim et al. (hereinafter "Lim") and Wei et al. (hereinafter "Wei"). Lim and Wei are directed at least in part towards displaying strings of text composed of both single and double byte character sets. Merkin discloses storing a plurality of text messages in a data structure outside of the BIOS so that the messages can be easily modified for national language support without the need for modifying the code of the BIOS. Merkin, however, does not disclose specific details of the character sets used to store the text messages. Lim teaches a mixed character set text string for the purpose of representing two or more languages in a text string. The character sets may be of mixed byte sizes such as a single byte character set mixed with a double byte character set. Lim provides for identifying whether each character in the string is a single byte or double byte character. Wei explicitly teaches the use of escape codes to encode both single and double byte characters within a string of text. The Examiner believes the combination of the teachings of Lim, Wei and Merkin render the claimed invention obvious.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ehrman, US 6,400,287 B1 filed 7/10/2000 discloses creating and converting data between single, double, and mixed byte character sets.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 571-272-4101. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 571-272-4090. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER

PJS
2/28/2005